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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,533

Applicant(s)

TAMAI, SEIICHIRO

Examiner

Kevin Siangchin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05/10/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Drawings

Response to Drawing Corrections

1. Corrected drawings were received on June 28, 2004. These drawings are acceptable.

Specification

Objections: Title of the Invention

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Objections

3. In the first paragraph of page 20 of the Applicant's Specification, the Applicant proposes:

[T]he pixel block of the outline portion is represented by an outline data value of "1," and, by exclusive disjunction of the pixel values of two pieces of outline [i.e. the outline of the captured finger and the reference outline] data from the same location, the number of pixels whose result is "1" (having an identical pixel value) is defined as the level of agreement

Exclusive disjunction, or XOR, yields a value of "1" if and only if both of the input pixels (i.e. a pixel from the outline of the captured finger and a pixel from the reference outline, both pixels being from the same location) differ. In this sense, the XOR of the two outlines actually measures the level of *disagreement* between the outlines. Although the current language is technically correct – a level of disagreement implies the converse, a level of agreement – it is suggested that the Applicant revise the current language to reflect the actual meaning of exclusive disjunction.

4. The disclosure is objected to because of the following informality. On page 26, line 2 of the Applicant's Specification, the symbol "C1" should be replaced with "C2". Appropriate correction is required.

Claims

Response to Amendments to the Claims

5. The amendments to the Claims, filed June 28, 2004, have been entered and made of record. Claims 2, 4, 5, 6, 7, 16, 18, 26, and 27 have been amended accordingly. Claim 1 has been cancelled.
6. The amendment to Claim 5 overcomes all Claim objections posed in the previous Office Action.

Response to Arguments and Remarks

Claims 2 and 27 and U.S. Patent 4,641,349 (Flom et al.).

7. The Applicant's arguments put forth in the "Amendment and Response to Office Action", filed on June 28, 2004 (hereinafter, referred to as the "Applicant's Response"), have been fully considered. The Applicant's arguments with respect to U.S. Patent No. 4,641,349 (issued to Flom et al.) and, more generally, with respect to the rejections of Claims 2 and 27 under U.S.C. § 102(b) are considered by the Examiner to be persuasive (refer to page 10, paragraphs 2-3 and page 13, paragraph 1 of the Applicant's Response). Therefore, the rejections have been withdrawn. Although the Examiner does not agree with the Applicant's arguments relating to the dependant claim limitations, due to the dependence of these claims on Claims 2 and 27, all rejections of the dependent claims under U.S.C. § 102(b) and 103(a) have likewise been withdrawn. The Examiner's dissent is expressed in the paragraphs that follow. Upon further consideration, new grounds of rejection are made in view of [Holliman00] (U.S. Patent 6,075,557). These are presented in the Prior Art rejections below.

Claim 18 and U.S. Patent 5,559,504 (Itsumi et al.).

8. The following is in regard to the Applicant's comments with respect to Claim 18 and U.S. Patent No. 5,559,504 (henceforth, referred to as [Itsumi96]). Generally, [Itsumi96] discloses an apparatus for acquiring biometric data from a fingerprint. The apparatus consists of a pressure-sensitive sheet formed on

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a set of linear contact electrodes. For the sake of brevity, the pressure-sensitive sheet and electrodes will be collectively referred to as the *input unit* ([Itsumi96] Fig. 1, reference number 10).

9. The resistance across these electrodes changes as pressure is applied by a user's finger. The change in resistance is converted into a one-dimensional signal which represents the biometric data of the finger. This biometric signal is compared with stored reference biometric signals in order to verify the identity of the user. Refer to the Abstract of [Itsumi96]. [Itsumi96] discloses several applications of such an apparatus including a portable identification card ([Itsumi96], Fig. 24). As shown in the previous Office Action and illustrated in Fig. 26 of [Itsumi96], the biometric information storage means and verification means proposed in Claim 18 are indeed part of the identification card of [Itsumi96].

10. The one-dimensional "resistance signal" ([Itsumi96] Fig. 4) is an image of the fingerprint, in the sense that it is a one-dimensional *representation* of the fingerprint – albeit not a visual or optical representation. Visual or optical images are often expressed or interpreted as one-dimensional signals, so the resistance signal's dimensionality does not detract from it being an image. See, for example, [Itsumi96] column 1, lines 30-39). Seen in this light, the input unit of [Itsumi96] represents "an image data obtaining means for obtaining image data from outside describing a body part [i.e. a fingerprint]", as originally claimed in Claim 18.

11. Before addressing the limitations added to Claim 18 and the Applicant's arguments with respect to these, some remarks are in order regarding these limitations, their interpretation in this document, and their plausibility relative to the current state of technology and the state of technology at the time of the Applicant's claimed invention. First, it should be noted that the current language used to describe the added limitations is grammatically improper. The word "with" will be interpreted as implying inclusion and, as such, will, for the purposes of this document, be replaced with the words "includes a". It is the Examiner's contention that the claimed *image obtaining means* cannot be viewed as a optical image obtaining means (e.g. a camera, or the like), in the same vein as the scanning means of Claim 1, and simultaneously be part of a portable card. The current language of Claim 18 and the Applicant's arguments on page 11 of the Applicant's Response seem, however, to imply as much. Current technology, and most certainly the technology at the time of the Applicant's claimed invention, would not permit the incorporation of practical

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optical image capture devices¹ into a card with the dimensions proposed in the Applicant's Specification (e.g. those of an ATM card – see paragraph [0054] and Figs. 4A-4C). Where strictly optical image data are involved, it will be assumed, in this document, that the image data was captured externally by another device separate from the portable card. Note that these observations do not apply to [Itsumi96] and, therefore, do not diminish the discussion of [Itsumi96] above.

12. [Itsumi96] disclose a guide mark printed on the surface of the input unit indicating the outline of the finger and serving as a guide for the desired placement of the finger. See [Itsumi96] column 2, paragraph² 2; column 8, paragraph 2; and [Itsumi96] Fig. 8. According to [Itsumi96], this facilitates the reproducibility of the resistance signal. In light of the discussion above, this guide mark represents a “guide showing the outline of the body part [fingerprint] before obtaining the object image”.

13. According to the Applicant, “though [Itsumi96] would be effective in obtaining the biometric data using the pressure-sensitive sheet, the technique of printing a mark can not be applied in a case in which the biometric data is obtained by imaging as in the present application”. In response to these comments, the Applicant should realize the mark depicted in Fig. 8 of [Itsumi96] has little to do with the acquisition of biometric data. Rather, the mark serves as a visual means for guiding or facilitating the proper alignment of the user's finger with respect to the acquisition device (i.e. the pressure-sensitive sheet). This, in turn, facilitates the proper acquisition of the user's biometric data, in the same vein as the Applicant's claimed guide display means. Clearly, then, the guide is applicable to acquisition of biometric data, regardless of whether that data is obtained by imaging or by observing induced changes in the resistance of electrodes. Though it is disclosed in the Applicant's Specification, Claim 18 is devoid of any language that implies that the biometric data – or image data (see above), for that matter – is necessarily derived from imaging.

14. The Applicant further asserts: “[Itsumi96] is an inflexible technique specifically invented for obtaining fingerprints and it is not possible to apply to imaging of the iris”. The inflexibility of [Itsumi96]

¹ This is particularly true for any device capable of capturing an optical image of an iris. Other than an optical sensor – which, by itself, may be small – capturing the image of an iris requires auxiliary optical components such as lenses, etc. These are necessitated because, for practical purposes, an image of the iris must be captured some distance away from the iris. Optical components such as lenses do not generally admit to arbitrary miniaturization.

² When referring to paragraphs in the cited references, the convention followed here is that the paragraph number is assigned to paragraphs of a given column (if applicable) or section, sequentially, beginning with the first full paragraph. Paragraphs that carry over to other columns will be referred to as the last paragraph of the column in which they began.

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is debatable. However, [Itsumi96] is clearly intended for fingerprints and is unlikely to be capable of obtaining biometric data from the iris. [Itsumi96] nonetheless addresses the *claimed* subject matter of Claim 18, as the current language of Claim 18 sets forth no application of the claimed portable card to the “imaging of the iris”, nor does the language claim any feature which would necessitate such imaging³. Moreover, in view of the discussion above, it is unlikely that the portable card would be capable of such an application, in any case.

15. The purpose of the preceding discussion is primarily to illustrate the broadness and deficiencies of the current language of Claim 18. As shown below, [Lane97] (U.S. Patent No. 5,623,552) discloses a portable card, wherein the image data, stored and verified thereon, is strictly a visual representation of the observed body part. The Applicant failed to provide any convincing argument as to why the “guide display means” of [Itsumi96] is inapplicable to portable cards, wherein “the biometric data is obtained by imaging”. As shown below, [Itsumi96] discloses the “guide showing the outline of the body part [fingerprint] before obtaining the object image”, which [Lane97] lacks.

Claims 16-17 and 26, and U.S. Patent 5,802,199 (Pare, Jr. et al.).

16. According to the Applicant, “[I]ike Flom ... Pare does not disclose the technique of guiding the person being tested so that the object is in the proper position in terms of the guide image”. See paragraph 3 on page 13 of the Applicant’s Response. Though this is the case, [Pare98] (U.S. Patent No. 5,802,199) was not shown in the previous Office Action to teach this aspect of the Applicant’s claimed invention. Rather, it was effectively shown in the previous Office Action that [Pare98] teaches a “network-based biometric identification system” and, therefore, the “network-based” elements of Claims 16-17 and 26. It was argued in the previous Office Action, that given the teachings of [Pare98], it would have been obvious to one of ordinary skill in the art, at the time of the Applicant’s claimed invention, to extend a unitary, localized “identity verification apparatus”, exhibiting the claimed features of, say, Claim 1, to be operable within a network-based context. This is well within the capabilities of one of ordinary skill in the art. It was further argued that, in such a construction, certain features of the localized apparatus (e.g. a “guide display

³ Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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means”) would obviously have utility only if they were part of the terminal or node, as opposed to the centralized server. The Examiner concedes that neither Flom et al. nor [Pare98] adequately show the claimed “guide display means”. This, however, does not detract from the teachings of these references with regard to other elements of the Claims.

17. The Applicant goes on to say that “the present invention shows the guide image to the person being tested in order that the person is able to adjust the position [of the body part]”. See the last paragraph on page 13 of the Applicant’s Response. It is clear that the purpose of the claimed “guide display means” is to show the guide image to the person being tested. However, the Claims do not contain language suggesting that the purpose of this display is to further allow a person to adjust the position of the observed body part³. Moreover, the intended use of a claimed apparatus is not considered by the Office to limit the apparatus, unless it introduces or implies additional structure. See, for example, *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963). If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. See, for example, *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). Allowing a person align the observed body part does not introduce additional structure, as the process of alignment is performed solely on the part of the person. Finally, the Applicant poses various advantages of his/her/their claimed invention over [Pare98] and Flom et al. With regard to these remarks, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Objections

18. Claim 18 objected to because of the following informality. Claim 18 contains the phrase: “wherein the image data obtaining means *with* guide showing an outline of the body part...”. Clearly, the grammar of this phrase is improper. The word “with” should be replaced with “includes a”. Appropriate correction is required.

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Rejections Under 35 U.S.C. § 112(2)

19. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

20. Claim 2, 16, and 26-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

21. *The following is in regard to Claim 2. Claim 2 recites:*

A guide display means for displaying a guide layered over the object image, the guide showing an outline of the body part in proper position, before obtaining the object image.

22. That is, Claim 2 proposes the display of a guide layered over the object image, before obtaining the object. The circuitousness of this language should be apparent. It will be assumed through the remainder of this document that the Applicant meant displaying a guide layered over the moving (see paragraph [0098] of the Applicant's Specification), or previously captured object image, before the obtaining the still (see paragraph [0099] of the Applicant's Specification), or final object image used for extracting biometric information. Similar arguments apply to Claims 16 and 26-27.

Rejections Under 35 U.S.C. § 112(1)

23. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

24. Claim 18 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Applicant does not disclose a portable card with an "image data obtaining means", nor is such a device plausible, in view of the current and past state of technology. See paragraph 11 of this document.

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Rejections Under 35 U.S.C. § 103(a)

25. Before proceeding, note that extensive reference will be made to the previous Office Action (filed March 23, 2004). This will be referred to simply as "previous Office Action".

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. Claims 2, 6, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87] (U.S. Patent 4,641,349) in view of [Holliman00] (U.S. Patent 6,075,557).

28. *The following is in regard to Claim 2.* As shown in the previous Office Action (previous Office Action, pages 3-4), [Flom87] disclose an identity verification apparatus based on biometrics comprising:

- (2.a.) Scanning means for obtaining an object image by scanning a body part of a person without physical contact.
- (2.b.) An image display means for displaying the object image to the person
- (2.d.) A judgment means for judging whether the object image was scanned in the proper position. [Flom87] suggests the usage of an automatic alignment system using a feedback circuit and a servo-control mechanism to adjust the relative positions of the iris and the camera. Inherent to such a system is a means for judging whether the iris was scanned in the proper position.
- (2.e.) A verification means for extracting biometric information describing a form characteristic of the body part from the object image, if in the proper position, and verifying identity by comparison with stored reference biometric information

For the sake of brevity, the details relating to these items will not be repeated. The Applicant is referred to the previous Office Action.

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29. [Flom87] does not expressly disclose:

- (2.c.) A guide display means for displaying a guide layered over the moving, or previously captured object image, before the obtaining the still, or final object image used for extracting biometric information (please refer to the U.S.C. § 112(2) rejections above).

30. [Holliman00] disclose an image tracking system involving the recognition of the human face and the selection of the interesting image region, such as the eye region ([Holliman00], Abstract and column 11, lines 61-62). For the purposes of acceptably aligning this eye region, the system displays an image of the observer (e.g. observer 8 in [Holliman00] Fig. 16) as captured by a video camera (e.g. video camera 3 in [Holliman00] Fig. 16). The image is overlaid with a *graphical guide* (e.g. graphical guide 67 in [Holliman00] Fig. 18) indicating that the observer should position herself/himself so that his eyes are properly aligned with respect to the graphical guide on the display (e.g. display 7 in [Holliman00] Fig. 16). When the observer deems his/her eyes are adequately aligned he/she issues a command (i.e. he/she operates a button of the mouse 60 of [Holliman00] Fig. 16) initiating the capture and storage of the image of the eye region. See, for example, [Holliman00] column 11, lines 43-52. In other words, the system of [Holliman00] includes:

- (2.c1.) A guide display means for displaying a guide layered (i.e. the *graphical guide*) over the moving object image (i.e. the video image), before the obtaining the still, or final object image used for further processing.

According to [Holliman00], the decision of whether an image is properly aligned rests on the observer. Advantageously, this alleviates the system of the computational burden that would have otherwise been required had the determination of alignment been fully automated. Furthermore, because a human observer is more naturally attuned to varying environmental conditions such as lighting, as well as the peculiarities of his/her eye region, the aforementioned process ensures that the alignment is robust and efficient. See [Holliman00] column 11, last paragraph. Therefore, given [Holliman00], it would have been obvious to one of ordinary skill in the art, at the time of the Applicant's claimed invention, to incorporate the guide display means (i.e. graphical guide) of [Holliman00] into a biometric identity verification apparatus, such as that of [Flom87]. It would be understood that by properly aligning the eye – and, hence, the irises – one ensures that the most accurate biometric data can be extracted from the captured image. Furthermore, within the

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context of [Flom87], the still, or final object image would have been understood to be the image used for extracting biometric information. The combination of [Flom87] and [Holliman00] would, therefore, include:

- (2.c.) A guide display means for displaying a guide layered over the moving, or previously captured object image, before the obtaining the still, or final object image used for extracting biometric information (please refer to the U.S.C. § 112(2) rejections above).

Clearly this can be used in conjunction with item (2.d.) above.

31. *The following is in regard to Claim 6.* It was effectively shown in the previous Office Action that, the identity verification apparatus of [Flom87] includes:

- (6.a.) A repetition control means for controlling the scanning means in order to repeatedly scan the body part.
- (6.b.) A verification means for extracting biometric information from a plurality of object images obtained by repeated scanning and verifying identity.

The combination of [Flom87] and [Holliman00] would, thus, incorporate these elements. For the sake of brevity, the details relating to these items will not be repeated. The Applicant is referred to the previous Office Action (see previous Office Action, page 5).

32. *The following is in regard to Claims 27-28.* These claims recite substantially the same limitations as Claim 2. Therefore, with regard to Claims 27-28, remarks analogous to those presented above relating to Claim 2 are applicable.

33. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Ito03] (U.S. Patent 6,526,160).

34. *The following is in regard to Claim 3.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Ito03] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Ito03]

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along the same lines of the original rejection. For the sake of brevity, the details will not be repeated here.

The Applicant is referred to the previous Office Action (see previous Office Action, pages 6-7).

35. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Steinberg02] (U.S. Patent 6,433,818).

36. *The following is in regard to Claims 4-5.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Steinberg02] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Steinberg02] along the same lines of the original rejections. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, pages 7-10).

37. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Fleming] (GB Patent Application Publication 2,229,305).

38. *The following is in regard to Claims 7-11.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Fleming] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Fleming] along the same lines of the original rejections. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, pages 10-14).

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39. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Brown03] (U.S. Patent 6,618,806).

40. *The following is in regard to Claims 12-13.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Brown03] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Brown03] along the same lines of the original rejections. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, pages 14-15).

41. Claims 14-17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Pare98] (U.S. Patent 5,802,199).

42. *The following is in regard to Claims 14-17 and 26.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Pare98] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Pare98] along the same lines of the original rejections. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, pages 16-17 and 20-21). Also see the relevant remarks above responsive to the Applicant's Response.

43. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Musgrave] (U.S. Patent 6,377,699).

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44. *The following is in regard to Claim 19.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Musgrave] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Musgrave] along the same lines of the original rejection. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, page 21).

45. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Oda03] (U.S. Patent 6,591,001).

46. *The following is in regard to Claim 20.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Oda03] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Oda03] along the same lines of the original rejection. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, pages 21-22).

47. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Cambier03] (U.S. Patent 6,532,298).

48. *The following is in regard to Claim 21.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Cambier03] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the

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deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Cambier03] along the same lines of the original rejection. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, pages 22-23).

49. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Hsu00] (U.S. Patent 6,100,811).

50. *The following is in regard to Claim 22.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Hsu00] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Hsu00] along the same lines of the original rejection. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, page 23).

51. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Saito02] (U.S. Patent Application Publication 2002/0034321).

52. *The following is in regard to Claim 23.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Saito02] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Saito02] along the same lines of the original rejection. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, page 24).

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53. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Doster] (U.S. Patent 5,956,122).

54. *The following is in regard to Claim 24.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Doster] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Doster] along the same lines of the original rejection. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, pages 24-25).

55. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over [Flom87], in view of [Holliman00], in further view of [Pare03] (U.S. Patent 6,662,166).

56. *The following is in regard to Claim 25.* Note that the addition of the guide display means of [Holliman00] into the identification apparatus of [Flom87] does not detract from the statements given in the previous Office Action in support of the combination of [Pare03] with [Flom87]; nor does it diminish in any way the originally posed motivations to combine. [Holliman00] was shown above to remedy the deficiencies of [Flom87]. Therefore, a prima facie case of obviousness can be established in view of [Pare03] along the same lines of the original rejection. For the sake of brevity, the details will not be repeated here. The Applicant is referred to the previous Office Action (see previous Office Action, pages 25-26).

57. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over [Lane97] (U.S. Patent 5,623,552), in view of [Itsumi96] (U.S. Patent 5,559,504).

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58. *The following is in regard to Claim 18.* [Lane97] discloses a portable self-authenticating card which verifies an owner's identity using biometrics (e.g. a fingerprint). See [Lane97], Summary of the Invention, paragraph 3. The card includes the following:

- (18.a.) A biometric information storage means (e.g. memory **103** depicted in [Lane97] Fig. 2; see also [Lane97] column 2, lines 20-21 and 31-33) for storing reference biometric (i.e. stored fingerprint information – see [Lane97] column 2, lines 20-21 and 31-33 and column 5, lines 38-43) information describing a form characteristic of a body part (e.g. ridges and valleys of a fingerprint – see [Lane97] column 7, paragraph 2, sentences 1-2).
- (18.b₁.) An image data obtaining means (e.g. fingerprint sensor **102** of [Lane97] Figs. 1A and 2) for obtaining image data from outside describing a body part. Clearly, the image data is obtained on the outside of the card and is indicative of the fingerprint. Further, observe from [Lane97] Figs. 9 and 11 that the acquired image is a 2D binary representation of the fingerprint. Also notice that this representation is visual and, like typical digital images, consists of discrete pixel elements (e.g. [Lane97] Figs. 7, 9, and 11). See [Lane97] column 7, lines 3-5 and column 8, lines 2-5.
- (18.c.) A verification means (e.g. authenticator **107** shown in [Lane97], Fig. 2) for extracting biometric information (e.g. “line endings” **116** and “branches” **117** shown in [Lane97] Fig. 6) describing a form characteristic of the body part (e.g. ridges and valleys of a fingerprint) from the object image, and verifying identity by comparison with stored reference biometric information. See, for example, [Lane97] column 2, lines 29-35; [Lane97] column 5, lines 38-43; and column 7, paragraph 2.

[Lane97], however, does not show (18.b.): the image display means including a guide showing an outline of the body part, before obtaining the object image.

59. As discussed extensively above and in the previous Office Action, [Itsumi96] discloses a guide mark printed on the surface of a device for acquiring biometric data from a fingerprint. [Itsumi96] incorporates this device into a portable identification card which, like [Lane97], is capable of self-authentication. The guide mark indicates the outline of the finger and serves as a guide for the desired placement of the finger. It is clearly a permanent fixture of the acquisition device and thus shows the

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outline of the fingerprint before the fingerprint representation is obtained. In other words, the guide mark of [Itsumi96] represents a:

(18.b₂.) A guide showing an outline of the body part, before obtaining the object image.

Please refer to the previous discussion of [Itsumi96] and pages 5-6 of the previous Office Action.

60. According to [Itsumi96] ([Itsumi96], column 8, lines 6-14), the usage of the guide mark ensures the reproducibility of acquired signal. It should also be clear that a proper alignment of the finger, prior to the acquisition of the representative signal, facilitates the authentication process. Therefore, given [Itsumi96], it would have been obvious to one of ordinary skill in the art, at the time of the Applicant's claimed invention, to construct the image data obtaining means (i.e. the fingerprint sensor) of [Lane97] so as to include a guide mark showing an outline of the fingerprint in its desired location, before obtaining the object image. The result of such a construction is:

(18.b.) An image data obtaining means for obtaining image data from outside describing a body part, wherein the image data obtaining means includes a guide showing an outline of the body part, before obtaining the object image.

Citation of Relevant Prior Art

61. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

[Setlak98] Setlak et al. *U.S. Patent 5,852,670*. Filing Date: December 1997.

[Setlak98] discloses a guide display means, superimposed on a fingerprint image, which serves to guide a user in properly aligning his/her fingerprint with respect to some desired location.

[Tasaki] Tasaki et al. *U.S. Patent 4,783,823*. Filing Date: November 1988.

[Tasaki] discloses a portable card similar to that of [Lane97]. It is capable of storing reference biometric data and authenticating biometric data input via an "on-card" sensor.

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[Stock00] Stock et al. *U.S. Patent 6,011,858*. Filing Date: January 2000.

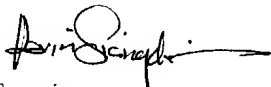
[Stock00] disclose a portable card configured such that a user's real-time physical characteristic must be matched with a biometric template of the physical characteristic stored in the memory card to verify the true holder of the memory card and gain access to the contents of the application file structure. Whereas [Tasaki] and [Lane97] acquire the biometric image via on-card sensors, [Stock00] acquires this data from an external sensor or other external source.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Siangchin whose telephone number is (703)305-7569. The examiner can normally be reached on 9:00am - 5:30pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

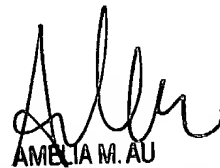
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Kevin Siangchin



Examiner
Art Unit 2623

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